

REMARKS

By this Amendment, claims 1-4 are cancelled, claims 5-18 are amended, and claims 19-21 are added. Thus, claims 5-21 are now active in the application. Reconsideration and reexamination of the application are respectfully requested.

The specification and abstract have been carefully reviewed and revised to correct grammatical and idiomatic errors in order to aid the Examiner in further consideration of the application. The amendments to the specification and abstract are incorporated in the attached substitute specification and abstract. No new matter has been added.

Also attached hereto is a marked-up version of the substitute specification and abstract illustrating the changes made to the original specification and abstract.

The Applicants thank the Examiner for considering the references listed on the Form PTO-1449 filed on June 24, 2003, and for initialing and returning a copy of the June 24, 2003 Form PTO-1449 with the July 2, 2003 Office Action. However, the Applicants wish to inform the Examiner that the January 16, 2001 Form PTO-1449 has not been returned to the Applicants. The Applicants respectfully request the Examiner to consider the reference listed on the January 16, 2001 Form PTO-1449 and to initial and return of the copy of the Form PTO-1449 to the Applicants.

The Applicants thank the Examiner for kindly indicating in page 4 of the Office Action that claims 8-18 are allowed. Minor editorial amendments were made to claims 8-18 in order to improve the U.S. form thereof. The Applicants respectfully submit that claims 8-18, as amended, are still in condition for allowance.

On page 2 of the Office Action, claims 5-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Vecchiarino et al. (U.S. 5,799,385). This rejection is traversed. Furthermore, the Applicants respectfully submit that this rejection is inapplicable to new claims 19-21 for the following reasons.

The present invention provides for the injection of a first molten thermoplastic resin from a first injection cylinder into a cavity. The present invention also provides for the injection of a second molten thermoplastic resin from a second injection cylinder into the cavity without bringing the second molten thermoplastic resin into contact with the first molten thermoplastic resin injected into the cavity. The second molten thermoplastic resin can be injected into the cavity either concurrently with the injection of the first molten thermoplastic resin into the cavity, during the injection of the first molten thermoplastic resin into the cavity, or after the completion of the injection of the first molten thermoplastic resin into the cavity. The second molten thermoplastic resin does not come into contact with the first molten thermoplastic resin until a pressurized fluid is introduced into the second thermoplastic resin to thereby form a hollow portion inside the second thermoplastic resin. As a result of this inventive process, and as described in lines 21 to 27 on page 9 of the specification, a desired portion of the molded article can be reliably constituted of the first and second thermoplastic resins, and the form (the thickness, width and length, for example), of the portions of the molded article which are made of the first and second thermoplastic resins can be accurately and easily controlled.

Claims 5 and 19 each recite a method for injection-molding a molded article having a hollow portion. The method of claims 5 and 19 each comprises injecting a first molten

thermoplastic resin from the first injection cylinder into the cavity through the first-molten-resin injection portion. Further, the method of claims 5 and 19 further comprise injecting the second molten thermoplastic resin from the second injection cylinder into the cavity through the second-molten-resin injection portion, without bringing the second molten thermoplastic resin into contact with the first molten thermoplastic resin injected into the cavity, concurrently with the start of the injection of the first molten thermoplastic resin into the cavity, during the injection of the first molten thermoplastic resin into the cavity, or after completion of the injection of the first molten thermoplastic resin into the cavity. Further, the method of claims 5 and 19 further comprise introducing the pressurized fluid into the second molten thermoplastic resin in the cavity from the pressurized-fluid introducing portion during the injecting the second molten thermoplastic resin into the cavity or after completion of the injecting the second molten thermoplastic resin into the cavity to thereby form the hollow portion inside the second thermoplastic resin.

Despite the Examiner's assertion to the contrary, Vecchiarino et al. does not disclose or suggest injecting a second molten thermoplastic resin from a second injection cylinder into the cavity through a second-molten-resin injection portion, without bringing the second molten thermoplastic resin into contact with the first molten thermoplastic resin injected into the cavity, concurrently with the start of the injection of the first molten thermoplastic resin into the cavity, during the injection of the first molten thermoplastic resin into the cavity, or after completion of the injection of the first molten thermoplastic resin into the cavity, as recited in claims 5 and 19. Instead, Vecchiarino et al. discloses a process for coinjection molding a trim panel in a

“sandwich” type arrangement. Vecchiarino et al. specifically provides that “the process according to the invention” forms in the mold 1 a partial structure of panel by injection molding a material for the external surface and a material for the inner support (see Column 3, lines 6-10). That is, Vecchiarino et al. discloses coinjection molding for producing a panel having an inner core of semi-rigid material (inner core material) 10 and two external layers of covering material (surface material) 9. The panel obtained by coinjection molding is provided with a covering sheet 9 that extends on both sides of the semi-rigid material 10 in the “sandwich” type arrangement (see Column 3, lines 54-57, Column 4, lines 35-40, and Abstract).

As described beginning at Column 2, line 66 of Vecchiarino et al., the term “coinjection” refers to “an injection molding process wherein two different materials are injected into the same mold cavity, independently on the fact that they are injected simultaneously or successively”. Further, Vecchiarino et al. discloses a plurality of coinjection injectors 112 (see Fig. 8 for first embodiment) or 125 (see Fig. 10 for second embodiment) are provided to inject material A and material B into the mold cavity. However, each of the materials A or B are injected through the same injection port 113b (see Fig. 8), 126 (see Fig. 10) when materials A and B are coinjected into the mold to form the “sandwich” type panel. Therefore, irrespective of whether the two different materials are coinjected simultaneously or successively, or irrespective of whether coinjection is carried out in only one point or several points (see Column 6, lines 36-37), materials A and materials B immediately come into contact with each other in the mold cavity since each of the coinjection injectors 112 or 125 injects material A and B into the mold cavity to form the “sandwich” type structure of the inner core material 10 and surface material 9.

Therefore, Vecchiarino et al. clearly does not disclose or suggest injecting a second molten thermoplastic resin from a second injection cylinder into the cavity through a second-molten-resin injection portion, without bringing the second molten thermoplastic resin into contact with the first molten thermoplastic resin injected into the cavity, concurrently with the start of the injection of the first molten thermoplastic resin into the cavity, during the injection of the first molten thermoplastic resin into the cavity, or after completion of the injection of the first molten thermoplastic resin into the cavity, as recited in claims 5 and 19.

Therefore, since Vecchiarino et al. fails to disclose each and every limitation as recited in claims 5 and 19, the Applicants respectfully submit that Vecchiarino et al. does not anticipate claims 5 and 19.

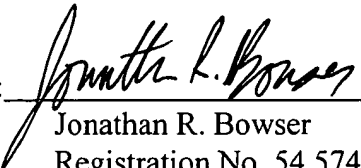
Because of the clear distinctions discussed above, it is submitted that the teachings of Vecchiarino et al. do not meet each and every limitation of claims 5 and 19. Furthermore, it is submitted that the distinctions are such that the distinctions are such that a person having ordinary skill in the art at the time the invention was made would not have been motivated to modify Vecchiarino et al., or to make any combination of the references of record, in such as manner as to result in, or otherwise render obvious, the present invention as recited in claims 5 and 19. Therefore, it is submitted that claims 5 and 19, as well as claims 6-7 and 20-21 which depend therefrom, are clearly allowable over the prior art as applied by the Examiner.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone to resolve such issues.

Respectfully submitted,

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